Elytra, Tokyo, **32** (2): 287–292, November 20, 2004

Notes on *Pterostichus cordatissimus* (STRANEO) (Coleoptera, Carabidae)

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Abstract A pterostichine carabid beetle from Central Japan, *Pterostichus cordatissimus* (STRANEO), is redescribed on the basis of the holotype, but its true systematic position as well as its exact type locality are not clear.

Pterostichus cordatissimus (STRANEO) is a rather small pterostichine carabid beetle originally described from Japan under the name *Feronia cordatissima* (1937, p. 447). It was redescribed by JEDLIČKA (1962, p. 286) in his monograph of the pterostichine carabids from East Asia. NAKANE (1983, p. 11) gave a detailed redescription, but his account was based on a translation of the original description.

KASAHARA (1988) regarded the species as a member of *Pterostichus* (*Nialoe*) *ohdaisanus* NAKANE known from Central Japan, though he did not make a critical reexamination of STRANEO's type. Since then, his view has been widely accepted by Japanese specialists of carabid beetles. The species assigned by KASAHARA to *P. cordatissimus* was very recently described under the name *P.* (*N.*) *naokii* MORITA (2003, p. 5).

In order to clarify its true systematic position, I studied the holotype of this species. I am therefore going to redescribe it, though it has become evident that there still remain several problems concerning its true systematic position as well as its exact location of the habitat.

The following abbreviations are used herein: HW–greatest width of head; GL–length of gena, measured along the mid-line; eL–length of eye, measured along the mid-line; PW–greatest width of pronotum; PL–length of pronotum, measured along the mid-line; PA–width of pronotal apex; PB–width of pronotal base; EL–greatest length of elytra; EW–greatest width of elytra; EB–width of elytral base; FL–length of metafemur; ML–length of metatrochanter; TL–length of hind tarsus; MSNM – Museo Civico di Storia Naturale Milano.

Before going further, I wish to express my deep gratitude to Dr. Shun-Ichi UÉNO of the National Science Museum (Nat. Hist.), Tokyo, for critically reading the original manuscript of this paper and for giving me information of the type locality of *P. cordatissimus*.

Thanks are also due to Dr. Fabrizio RIGATO and Dr. Maurizio PAVESI for loan of

the type material of *Pterostichus cordatissimus* (STRANEO) under their care. Similar prompt aid was given by Dr. Luca TOLEDANO.

Pterostichus cordatissimus (STRANEO)

[Japanese name : Tsuyakeshi-naga-gomimushi]

(Figs. 1–2)

Feronia (*Pterostichus*) *cordatissima* STRANEO, 1937, Annli. Mus. civ. Stor. nat. Genova, **59**: 447.
Pterostichus cordatissimus: JEDLIČKA, 1962. Ent. Abh. Mus. Tierk. Dresden, **26**: 286, fig. 80.——NAKANE, 1983. Nat. & Ins., Tokyo, **18** (8): 11.

Diagnosis. Rather small species (12.6 mm); elytra opaque; antennal segment II with two setae on each side; antennae slender and reaching basal third of elytra; pronotum strongly constricted towards base; base of pronotum emarginate throughout; basal halves of elytra rather narrow; basal part of elytral intervals without wrinkles; elytral interval III with five setiferous dorsal pores; elytral microsculpture consisting of isodiametric and granular meshes; anal sternite widely arcuate and slightly produced at middle.

Redescription based on the holotype. Length: 12.6 mm (measured from apical margin of clypeus to apices of elytra).

Body black; dorsal surface shiny, but the elytra are opaque; ventral side dark brown, but the gula and the ventral sides of genae are black; mandibles, labrum, antennae, apical half of clypeus and mouth parts dark brown, but the palpi are brown.

Head moderately convex; frontal furrows linear, shallow, slightly divergent posteriad and reaching a level a little before the anterior supraorbital pores on each side; eyes moderately convex; lateral grooves straight, becoming wider towards apices, reaching the level of posterior supraorbital pore, and slightly curved outwards at the posterior ends on each side; posterior supraorbital pore situated at the post-eye level; genae short, weakly convex and obliquely arcuate in dorsal view; microsculpture consisting of isodiametric meshes; surface microscopically and sparsely punctate; apex of labrum straight; clypeal suture shallow; mentum tooth wide, bifid, and rounded at each tip; mandibles long and strongly hooked at apices; antennae slender and reaching basal third of elytra; antennal segment II with two setae on dorsal and ventral sides; relative lengths of antennal segments as follows:—I : II : III : IV : V : VI : XI≒1 : 0.61 : 1.05 : 0.92 : 0.94 : 0.98 : 0.94 on the right, ≒1 : 0.63 : 1.08 : 0.95 : 0.97 : 0.98 : 0.92 on the left.

Pronotum cordate, moderately convex, and with narrow base; disc moderately convex; sides strongly arcuate in front, strongly sinuate and weakly crenulate, and then slightly divergent towards hind angles; reflexed lateral borders narrow; apex moderately emarginate; apical angles moderately produced and obtuse at the tips; hind angles rectangular and smooth at the sides; base strongly emarginate throughout; basal foveae narrow, shallow and linear at the bottom; outer spaces of basal foveae coarsely and sparsely punctate; inner spaces of basal foveae and basal part with short and longitudi-

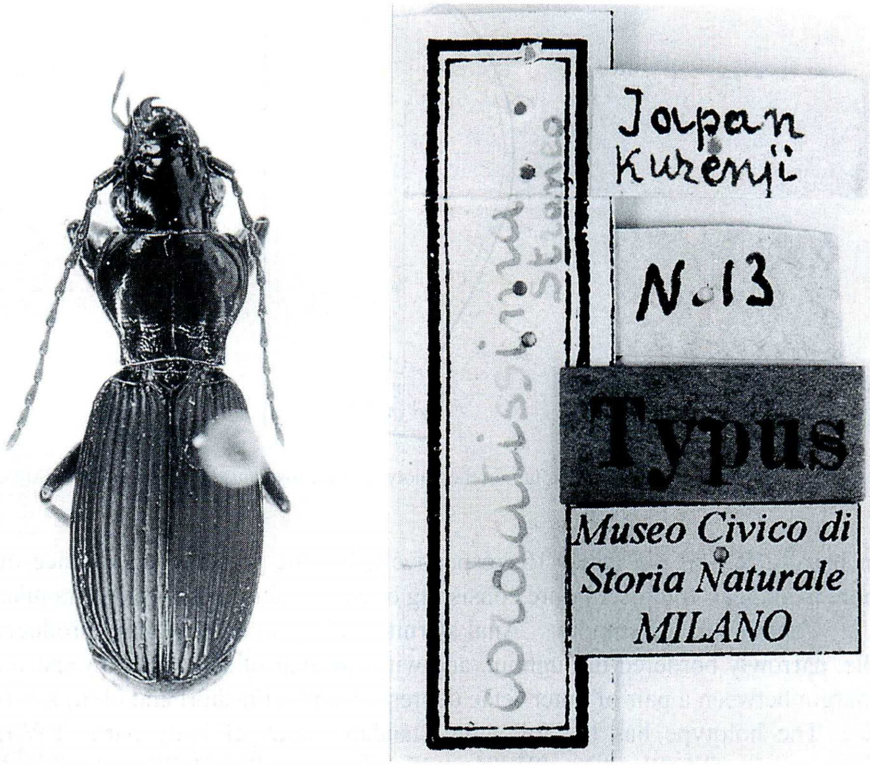

Fig. 1. Holotype of *Pterostichus cordatissimus* (STRANEO) and labels attached to the holotype.

nal wrinkles; anterior marginal seta situated a little before the widest part; microsculpture consisting of isodiametric meshes on the disc and of wide ones on the basal part; anterior transverse impression very shallow; median line clearly impressed, rather deep, reaching neither apex nor base, and with transverse wrinkles.

Elytra elongate with rather narrow basal part; shoulders oblique and widely arcuate; sides weakly arcuate towards the widest parts, and then moderately so at the apical parts; preapical emargination very wide and shallow; apex of each elytron subangulate and conjointly rounded; scutellar striole short, deep, weakly arcuate, free at the apical end, situated on interval I, and joining basal border on each side; basal pore situated at the meeting point of striae I and II; basal border very weakly arcuate on the left, obliquely straight on the right; striae clearly impressed and not punctate; striae 1–4 reaching basal border; striae 5–7 not reaching basal border; intervals moderately convex; marginal series consisting of 16 pores on the left and of 17 on the right; setiferous dorsal pores on interval III composed of five pores; on the left elytron, the first pore on stria 3, the second and third on stria 2, and the fourth and fifth joining stria 2 , and situated at basal 1/5, 2/5, a little behind the middle, 4/5 and 9/10, respectively; on the right elytron, the second and third on stria 2, the fourth and fifth joining stria 2, and situated

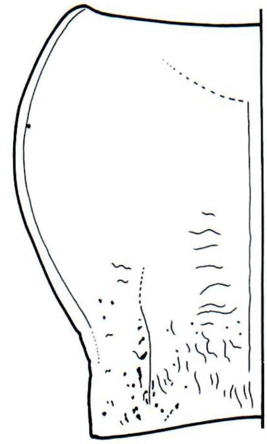

Fig. 2. Left side of pronotum in the holotype of *Pterostichus cordatissimus* (STRANEO).

at basal 2/5, 3/5, 4/5 and 9/10, respectively, but the presence or absence of the first pore is unclear; microsculpture consisting of isodiametric and weakly granular meshes.

Ventral surface smooth. Anal sternite widely arcuate, slightly produced at middle, narrowly bordered throughout, and with two pair of setae; narrow space along the margin between a pair of outer setae depressed, and with short and oblique wrinkles.

The holotype has the following standard ratios of body parts: PW/HW 1.31, GL/eL 0.44, PW/PL 1.30, PW/PA 1.37, PW/PB 1.48, PA/PB 1.08, EW/PW 1.25, EL/EW 1.55, EB/EW 0.60, ML/FL 0.47, and TL/HW 1.14.

Specimen examined. 1 ♀ (MSNM), "Japan / Kurenji" // "N. 13" // "Typus" // "Museo Civico di / Storia Naturale / MILANO" // "cordatissima STRANEO".

Notes. The anal projection in the male and the male genitalia serve as important characteristics in the pterostichine taxonomy. Unfortunately, the holotype of this species is a female and this makes its classification extremely difficult, and to make matters worse, STRANEO did not show the locality "Kurenji" in the original description, though the label "Japan / Kurenji" is attached to the holotype. Besides, I am unable to specify the exact location of Kurenji. There is only one place called Kurenji in Japan, which is situated in Sasagawa-chô of Matsuzaka-shi, Mie Prefecture, Central Japan, but that place is a temple and is always called Kyuren-ji by local people. It is possible that male specimens agreeing the holotype could be found in above place. However, it is more probable that this species belongs to a lineage different from the known Japanese species, so that the study should be enlarged to cover all pterostichine species from East Asia. In the future, the diagnostic characters of this species can be determined only by association with males collected at its exact type locality.

In order to facilitate the understanding of this species, the following comparative studies of my own are shown below.

1. The result of the comparison between the holotype and the female of *P.*

(*Nialoe*) *rhanis* TSCHITSCHÉRINE from Mt. Akagi-san of Gunma Prefecture.

The holotype of *P. cordatissimus* (STRANEO) is distinguished from the latter by the following points: 1) body much smaller and narrower, 2) lateral grooves on the head straight, 3) antennal segment II with two setae on each side, 4) sides of pronotum more strongly constricted towards the base, 5) elytral shape and microsculpture decisively different.

2. The result of the comparison between the holotype and a female paratype of *P.* (*N.*) *uchiyamai* MORITA from Mt. Kisokoma-ga-take of Nagano Prefecture.

The holotype of *P. cordatissimus* (STRANEO) is distinguished from the latter by the following points: 1) body slightly smaller, 2) genae more convex, 3) antennae slenderer, 4) antennal segment II with two setae on each side, 5) basal foveae of pronotum deeper, 6) base of pronotum more strongly emarginate, 7) elytral shoulders more oblique, 8) elytral microsculpture composed of isodiametric meshes, and 9) elytral apices conjointly rounded.

3. The result of the comparison between the holotype and the female of *P.* (*N.*) *ohdaisanus* NAKANE from Mt. Inamura-ga-take of Nara Prefecture.

The holotype of *P. cordatissimus* (STRANEO) is distinguished from the latter by the following points: 1) body form decisively different, 2) antennae slenderer, and 3) basal foveae of pronotum sparsely punctate. The microsculpture on dorsal surface in these two species is almost identical.

4. The results of the comparison between the holotype and the female of *P. kyushuensis* HABU from Mt. Hiko-san of Fukuoka Prefecture and the female of *P.* (*Paralianoe*) *daisenicus* ISHIDA from Mt. Daisen of Tottori Prefecture.

The body form of these species are decisively different.

要　　約

森田誠司：ツヤケシナガゴミムシ（新称）について．——ツヤケシナガゴミムシ *Pterostichus cordatissimus* (STRANEO) は，１頭の雌の標本を基に記載されたナガゴミムシである．原記載以降，本種の再記載は，おもに原記載からの引用または翻訳を基に公表されたものである．

原記載の中で“Fukui?”と記載されたために，そのまま和名が与えられ，福井県付近に産する *rhanis* 種群の種を本種とみなしてきた．筆者は正基準標本を調査し，わが国に産するすべての種の雌の標本と直接比較研究したが，一致することはなかった．したがって，本種の雄は未知であるばかりか，その分類学的位置も明らかにできなかった．そのため，和名をツヤケシナガゴミムシと改称した．また，基産地のKurenjiに関しても，三重県松坂市にそのような名称の寺が存在するが，地元では「きゅうれんじ」と呼ばれ真の基産地であることを，証明できなかった．

References

JEDLIČKA, A., 1962. Monographie des Tribus Pterostichini aus Ostasien (Pterostichi, Trigonotomi, Myadi) (Coleoptera–Carabidae). *Ent. Abh. Mus. Tierk. Dresden*, **26**: 177–346, 2 col. pls.

KASAHARA, S., 1988. The distribution and differentiation of pterostichine beetles in Japan. *In* SATÔ, M. (ed.), *The Beetles of Japan, with Special Reference to their Origin and Differentiation*, 53–65+5–6. Tokai University Press, Tokyo. (In Japanese.)
——— & M. SAITO [sic], 1992. Pterostichine carabid beetles of Fukui Prefecture, Central Japan I. Preliminary notes on the species of the subgenus *Pterostichus* s. lat. *Ent. J. Fukui*, (10): 9–19. (In Japanese, with English synopsis.)
MORITA, S., 2003. Two new *Pterostichus* (Coleoptera, Carabidae) from Honshu, Japan. *Jpn. J. syst. Ent.*, **9**: 1–8.
NAKANE, T., 1983. The beetles of Japan (new series) 62. *Nat. & Ins., Tokyo*, **18** (6): 14–18. (In Japanese.)
STRANEO, S. L., 1937. Note sulle *Feronia* paleartiche (5^a). Sulla posizione sistematica della *Feronia harpaloides* WOLL. *Annli. Mus. civ. Stor. nat. Genova*, **59**: 447–451.

Elytra, Tokyo, **32** (2): 292, November 20, 2004

Record of *Rostricephalus vitalisi* (Coleoptera, Elateridae) from Laos

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Through the courtesy of Dr. T. NIISATO, I was able to examine a relatively large and strange elaterid beetle collected from Laos. After a careful examination, it has become apparent that it is identical with *Rostricephalus vitalisi* FLEUTIAUX originally described from Tonkin. I will record it as a new distribution to the Laotian fauna in the following lines.

I wish to thank Dr. Tatsuya NIISATO for his kindness in supplying with valuable material.

Rostricephalus vitalisi FLEUTIAUX, 1918

Rostricephalus vitalisi FLEUTIAUX, 1918, Annls. Soc. ent. Fr., **187**: 253 (Tonkin: Chapa). —— SCHENKLING, 1927, Coleopt. Cat., pars 88 (Elateridae II): 425. —— FLEUTIAUX, 1936, Annls. Soc. ent. Fr., **105**: 285–286 (Tonkin: Chapa) [redescription]. —— SUZUKI, 1999, Misc. Rept. Hiwa Mus. nat. Hist., (38): 82 (Taiwan: Mt. He-wang Shan); 2003, Coleopterist's News, Tokyo, (143): 13–15, figs. 1–6 [redescription].

Rostrocephalus [sic] *Vitalisi* FLEUTIAUX, 1924, Opusc. Inst. scient. Indoch., (2): 141 (Tonkin: Chapa). —— SCHENKLING, 1927, Coleopt. Cat., pars 88 (Elateridae II): 425.

Specimen examined. 1♀, Phu Pan, 1,600–1,700 m, Ban Saleui, Houaphan Prov., Laos, 5–V–2002, local collector.

Distribution. Vietnam, Laos (new record), Taiwan.